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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/798,559 | 03/12/2004 | Dustin A. Woodbury | 33851/41886 | 6517 |

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EXAMINER

LE, THAO P

ART UNIT PAPER NUMBER

2818

DATE MAILED: 08/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/798,559

Applicant(s)

WOODBURY ET AL.

Examiner

Thao P. Le

Art Unit

2818

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 March 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-12 are rejected under 35 USC 102 (b) as being anticipated by Chi, U.S. Patent No. 5,173,437.

Regarding claim 1, Chi discloses a method of forming a capacitor in an IC, the method comprising (See Abstract, Figs. 5-8, and depending portions of specification):

Forming a first non-single crystalline layer (first polysilicon layer 56) on a gate dielectric layer 54 of a substrate 50 of an IC;

Forming a capacitor dielectric layer (58,60) on the first non-single-crystalline layer;

Forming a second non-single-crystalline layer (second polysilicon 62) on the capacitor dielectric layer;

Removing portions of the second non-single-crystalline layer to define a top plate (70) of the capacitor (abstract);

Removing portions of the capacitor dielectric layer to define a dielectric of the capacitor (lines 17-20, Col. 4; Fig. 7);

Removing portions of the first non-single-crystalline layer to define a bottom plate (80) of the capacitor after a top plate is define (lines 35-37, Col. 4; Fig. 7).

Kim et al., U.S. Patent No. 5,166,090, Tseng et al., U.S. Patent No. 5,550,077, Lu, U.S. Patent No. 5,110,752, Watanabe, U.S. Patent No. 6,420,222 also disclose all limitations of claim 1 above.

Regarding claim 2, Chi discloses wherein portions of the first non-single-crystalline layer are removed to define a gate of a transistor of the IC (Col. 4, Fig. 7).

Regarding claim 3, Chi discloses forming a mask 64 over the second non-single-crystalline layer with an opening and etching to remove the portions of the second non-single-crystalline layer (Fig. 6).

Regarding claim 4, Chi discloses the step of etching to remove the portions of the capacitor dielectric layer using the mask (lines 17-20, Col. 4).

Regarding claim 5, Chi discloses the use of top plate as a mask and etching to remove the portions of the capacitor dielectric layer (lines 17-20, Col. 4).

Regarding claim 6, Chi discloses wherein using the top plate as a mask and etching is performed one of before and after removing the portions of the first non-single-crystalline layer (Col. 4).

Regarding claims 7-11, Chi discloses forming a mask 72 over the top plate and exposed one or more of the first non-single-crystalline layer and capacitor dielectric layer and removing portions of the capacitor dielectric layer and first non-single-crystalline layer to define the bottom plate, and using the top plate as a mask to etching

and remove additional portions of the capacitor dielectric layer to define the dielectric layer of the capacitor (Fig. 7; Col.4).

Regarding claim 12, Chi discloses forming a top dielectric layer over the first and second plates (Fig. 8) and forming contact vias to the first plate through the top dielectric and the capacitor dielectric and to the second plate through the top dielectric (Cols. 4-5).

When responding to the office action, Applicants' are advice to provide the examiner with the line numbers and page numbers in the application and/or references cited to assist the examiner to locate the appropriate paragraphs.

A shortened statutory period for response to this action is set to expire 3 (three) months and 0 (zero) day from the day of this letter. Failure to respond within the period for response will cause the application to become abandoned (see M.P.E.P 710.02(b)).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thao P. Le whose telephone number is 571-272-1785. The examiner can normally be reached on M-T (7-6).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on 571-272-1787. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Thao P. Le'.

Thao P. Le

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